

ABSTRACT

The subject invention provides novel compositions containing one or more peptides or polypeptides which possess ribonuclease activity. Preferably the ribonucleases for inclusion in the compositions are ribonucleases that substantially lack deoxyribonuclease activity. A preferred embodiment is a composition comprising RNase A or RNase T1. Another aspect of the invention is to provide methods for synthesizing nucleic acids, typically DNA, using the compositions of the invention or one or more ribonucleases. Another aspect of the invention involves the use of the subject method of nucleic acid synthesis to carry out the synthesis step in a polymerase chain reaction experiment. Yet another aspect of the invention is to provide kits for the synthesis of nucleic acids, wherein the kits comprise one or more peptides or polypeptides that possess ribonuclease activity.

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